

FOUR RANCHES MINERALS

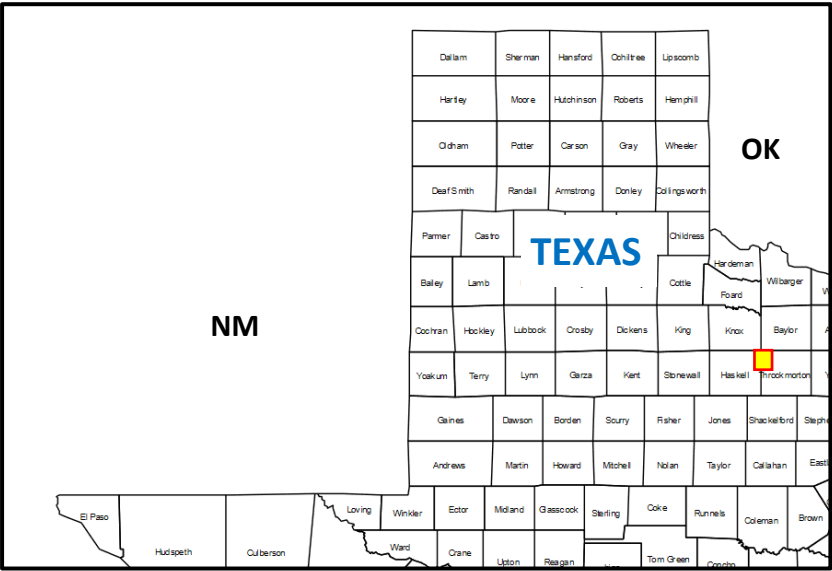
Throckmorton, Haskell and Baylor Counties, Texas



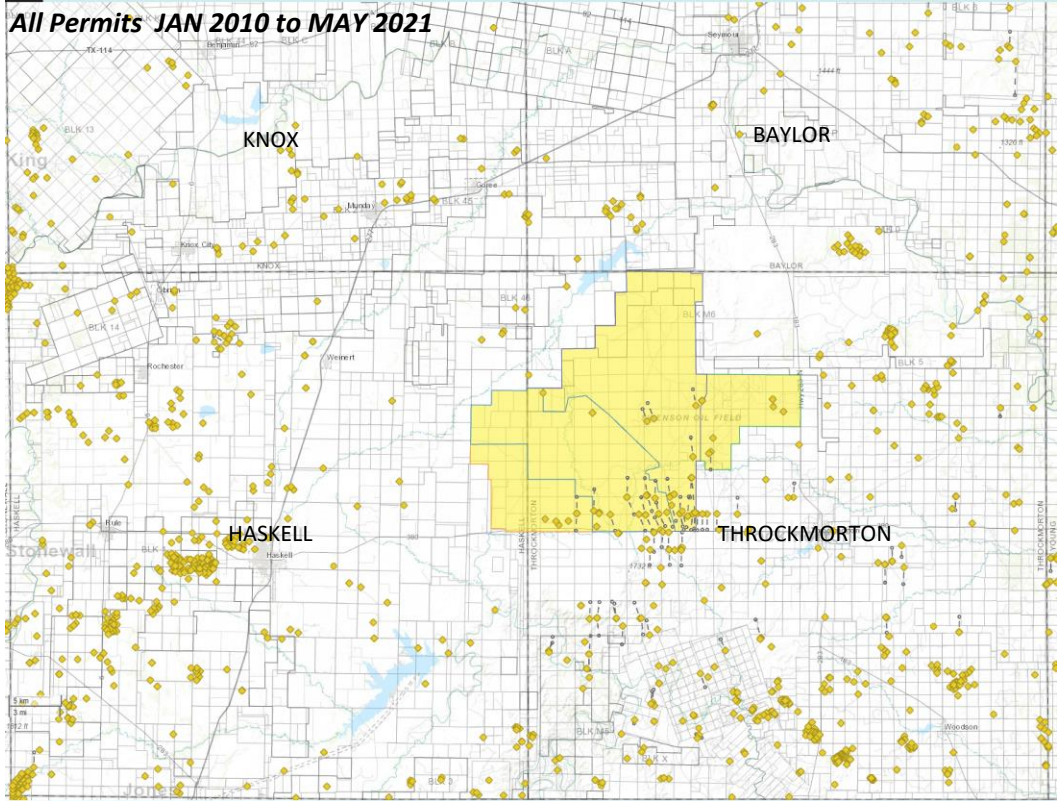
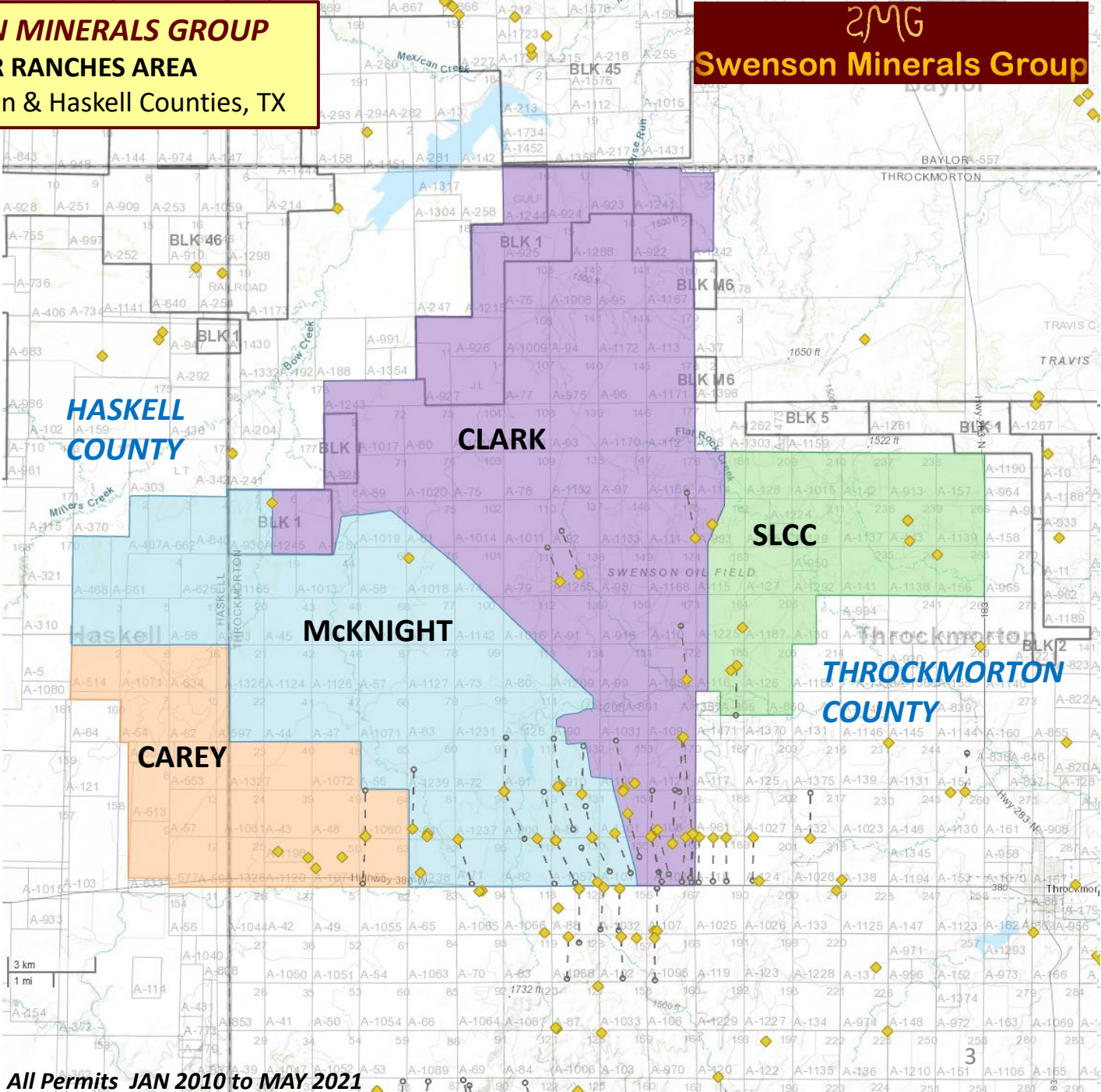
www.SwensonMinerals.com

Why Lease from Swenson Minerals Group?

- Long-term mineral owner of over 300,000 mineral acres in north central Texas – Eastern Shelf, Bend Arch producing areas. Currently approximately 250,000 are available for leasing in 2021.
- Contiguous mineral tracts in 12 counties – Cottle, Crosby, Dickens, Garza, Kent, Haskell, Jones, King, Motley, Stonewall, Shackleford and Throckmorton and smaller tracts throughout west Texas.
- SMG mineral areas are all in proven petroleum basins. Opportunities exist for New Exploration plus New Exploitation near active Producing areas as seen on the included Production maps. The New Exploration can occur in undrilled, virgin pressure environments. There is abundant, available subsurface and production data to assist in defining new plays, leads and prospects.
- SMG mineral areas contain multiple oil and gas reservoirs at shallow depths (1000-6000 ft) with relatively simple trap types that can be exploited with both vertical and horizontal completions. Few horizontal wells exist in the SMG mineral areas. Advances in horizontal well technology have improved the economics of these type plays.
- **SPECIFIC to the Four Ranches area** is a recent (2013) horizontal play in the Caddo (Reef) Limestone at 4800 feet – has produced over 1.3 million barrels of oil and 8.2 million cubic feet of gas - the gas rate has remained very strong. The Caddo and Marble Falls Conglomerates are also horizontal targets in the easternmost Ranch (SLCC) and southern Carey Ranch. A shallow gas play is present in the central ranches (Clark and McKnight).



SWENSON MINERALS GROUP
FOUR RANCHES AREA
Throckmorton & Haskell Counties, TX



All Permits JAN 2010 to MAY 2021

Stratigraphy & Structural Elements

North Central Texas Region

GENERALIZED SUBSURFACE STATIGRAPHIC SECTION		
SYSTEM AND SERIES	STAGE	GROUP OR FORMATION
CRETACEOUS	COMANCHEAN	GOODLAND FORMATION PALUXY FORMATION
		GLEN ROSE FORMATION
PERMIAN	OCHOAN	
	QUADALUPIAN	
	LEONARDIAN	
	WOLF-CAMPAN	
PENNSYLVANIAN	UPPER	CISCO GROUP BRECKENRIDGE FORMATION CISCO FORMATION HOME CREEK LIMESTONE COLONY CREEK SHALE RANGER LIMESTONE PLACID SHALE WINCHELL LIMESTONE CEDARTON SHALE ADAMS BRANCH LIMESTONE BROWNWOOD SHALE PALO PINTO FORMATION
	MIDDLE	STRAWN GROUP KEECHI CREEK SHALE CAPPS LIMESTONE GARNER FORMATION GRINDSTONE CREEK FORMATION LAZY BEND FORMATION
	LOWER	WICHITA GROUP CADDO FORMATION ATOKAN PREGNANT SHALE BIG SALINE FORMATION SMITHWICK SHALE "MORROW" MORROWAN MARBLE FALLS GROUP MARBLE FALLS LIMESTONE COMYN FORMATION
MISSISSIPPIAN	CHESTERIAN-MERAMEICAN	BARNETT SHALE
	OSAGEAN	CHAPPEL LIMESTONE VIOLA LIMESTONE
CAMP-DEWYAN	UPPER	SIMPSON GROUP ELLENBURGER GROUP
	LOWER	WILBERNS - RILEY - HICKORY FORMATIONS
PREC-CAMB	PRECAMBRIAN	GRANITE - DIORITE - METASEDIMENTS

TARGET RESERVOIRS in FOUR RANCHES AREA

← WOLFCAMP sandstones

← CISCO sandstones

Swenson Minerals Area

← STRAWN sandstones

← CADDO
Limestone Reef & Conglomerate

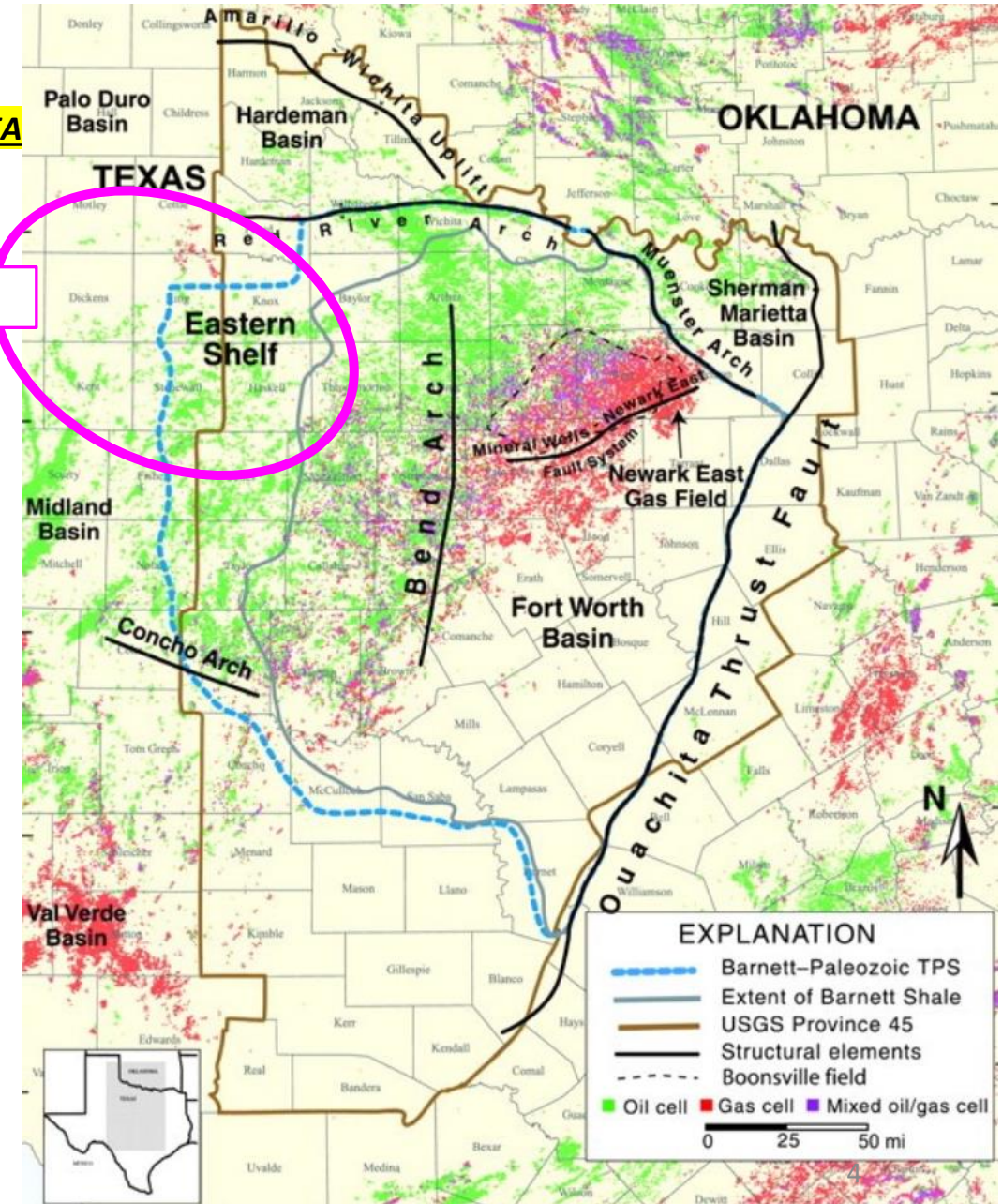
← Atoka Source Rocks

← Marble Falls Limestone & Conglomerate

← Morrowan Source Rock

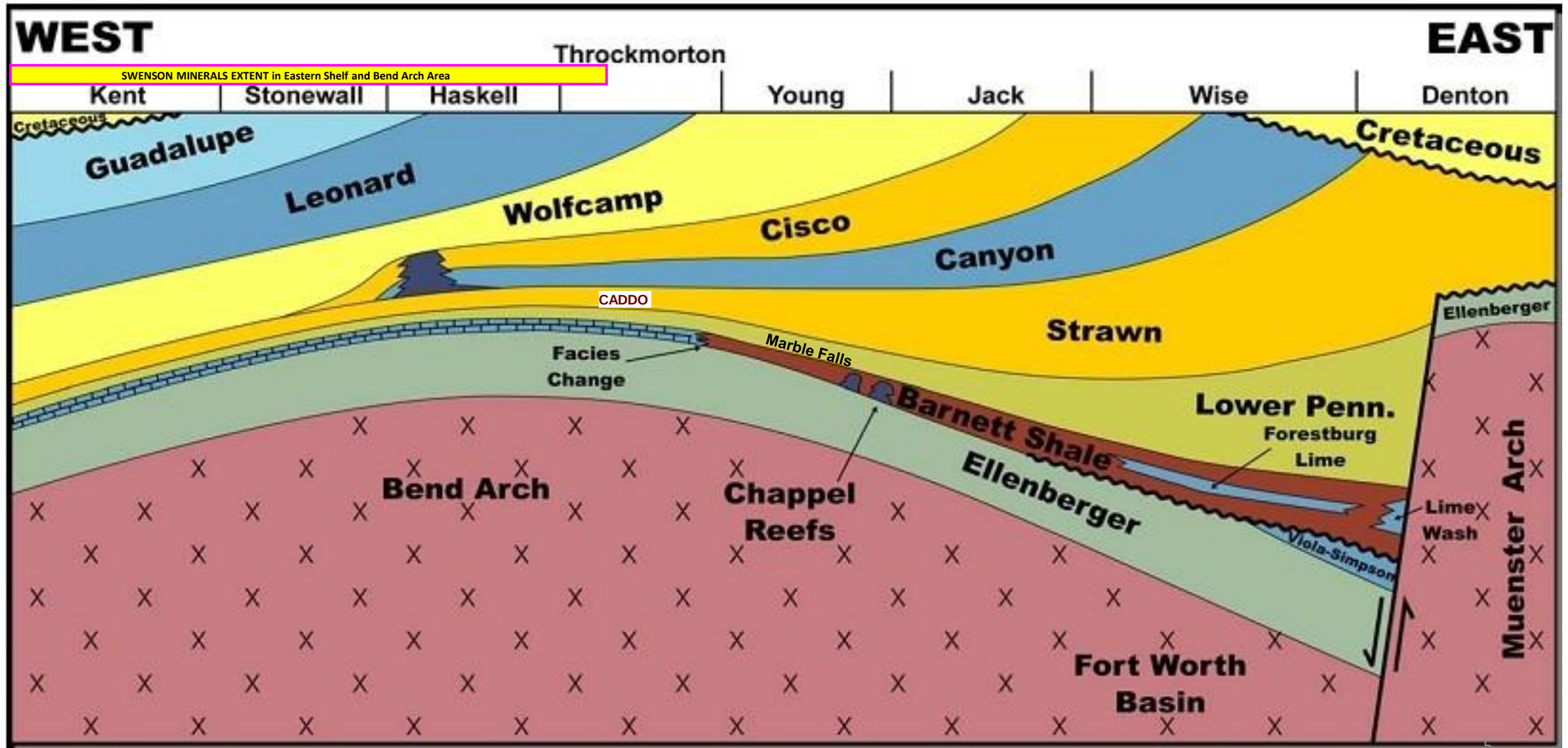
← World Class Source Rock – Barnett Shale

← Mississippian (Chester, Duffer) Limestone



Source rock
Clastic
Sandstone
Barnett Shale
Granite

Schematic Geologic Cross Section over Swenson Minerals Area



ALL WELLS Four Ranches Regional Area

TOOLS

Layer Symbology

Wells

+

-

APPLY

RESET ALL

Auto Apply

COLORS & SIZING

ANNOTATIONS

☒ Show Drillinginfo Well Symbol Set

☒ Show Trajectories/Bottom Holes

☒ Show Well Info at Bottom Hole

Opacity:

100%

Size Modifier:

0

Size By:

None

Color By:

Production Type

HIDE ADVANCED

Colors:

(Default) Discrete Set 1

☒ Bins

8

☐ Custom Values

Rank By:

Count

Color Bin Legend

☒ OIL

☒ DRY HOLE

☒ OIL & GAS

☒ EXPIRED PERMITS

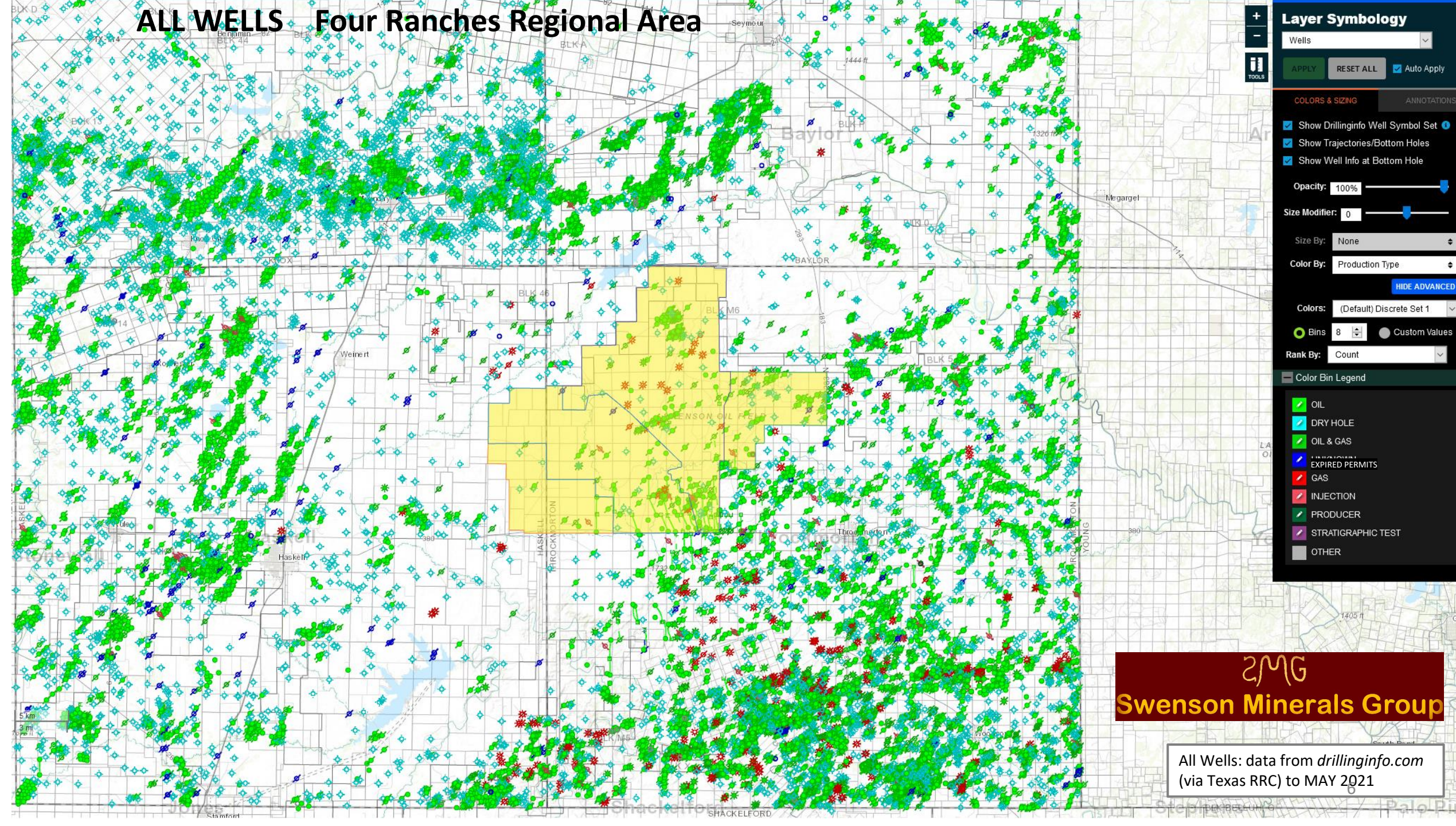
☒ GAS

☒ INJECTION

☒ PRODUCER

☒ STRATIGRAPHIC TEST

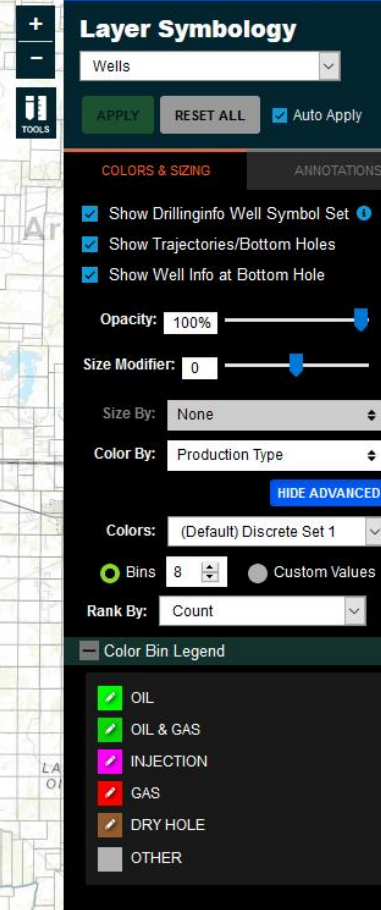
☒ OTHER



2MG
Swenson Minerals Group

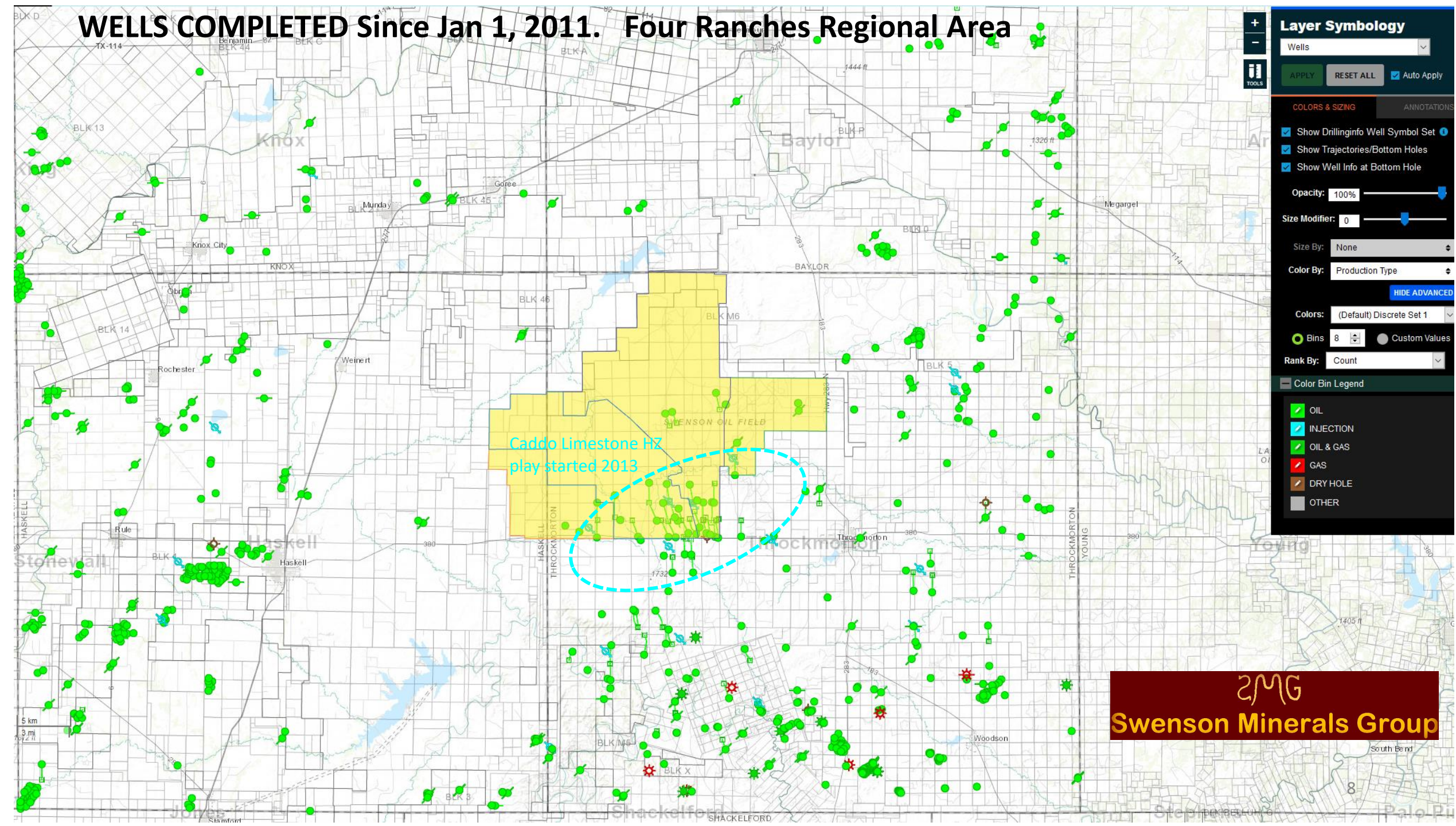
All Wells: data from *drillinginfo.com*
(via Texas RRC) to MAY 2021

WELLS COMPLETED Since Jan 1, 2000. Four Ranches Regional Area



2MG
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WELLS COMPLETED Since Jan 1, 2011. Four Ranches Regional Area



CUMULATIVE BOE by RESERVOIR Four Ranches Regional Area & PLAY TRENDS

PLAY TRENDS
indicate areas of potential new drilling: vertical, horizontal exploration & near field exploitation wells

BOE Legend

MOST O&G PRODUCTION
on or near
Swenson Four
Ranches Area is
from
CADDO,
STRAWN and
TANNEHILL
reservoirs.
"Other"/gray is
mainly local Caddo
and Strawn names

PRODUCTION by lease:
CUMULATIVE BOE to MAY 2021

Layer Symbology

Production
APPLY RESET ALL ☒ Auto Apply

COLORS & SIZING ANNOTATIONS

Opacity: 100%

Size Modifier: 0

Size By: Cum BOE

HIDE ADVANCED

Bins 10

Size Bin Legend

- 0 - 70,000
- 70,000 - 140,000
- 140,000 - 175,000
- 175,000 - 210,000
- 210,000 - 245,000
- 245,000 - 280,000
- > 280,000

Color By: Reservoir

HIDE ADVANCED

Colors: (Default) Discrete Set 1

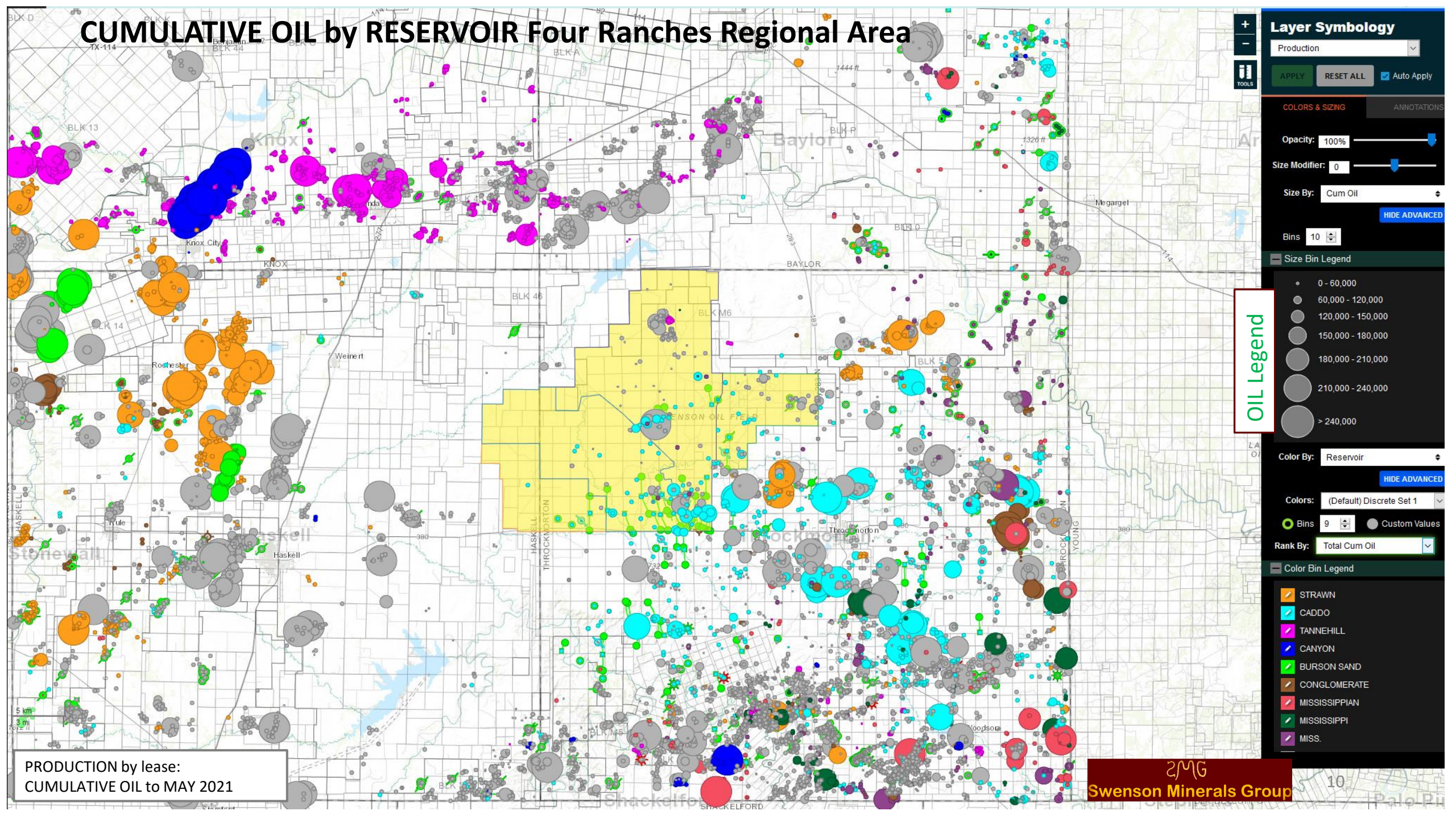
Bins 9 Custom Values

Rank By: Total Cum BOE

Color Bin Legend

- STRAWN
- CADDO
- TANNEHILL
- CANYON
- BURSON SAND
- CONGLOMERATE
- MISSISSIPPIAN
- MISSISSIPPI
- MISS.
- OTHER

CUMULATIVE OIL by RESERVOIR Four Ranches Regional Area



CUMULATIVE OIL by RESERVOIR Four Ranches Focus Area

PRODUCTION by lease DETAIL AREA:
CUMULATIVE OIL to MAY 2021

Potential Caddo HZ play

Conglomerate (Bend) 40 MBO

OIL Legend

- 0 - 70,000
- 70,000 - 140,000
- 140,000 - 175,000
- 175,000 - 210,000
- 210,000 - 245,000
- 245,000 - 280,000
- > 280,000

Layer Symbolology

Production: [Dropdown]

APPLY RESET ALL Auto Apply

COLORS & SIZING ANNOTATIONS

Opacity: 100%

Size Modifier: 0

Size By: Cum Oil

HIDE ADVANCED

Bins: 7

Size Bin Legend

Color By: Reservoir

HIDE ADVANCED

Colors: (Default) Discrete Set 1

Bins: 9 Custom Values

Rank By: Total Cum Oil

Color Bin Legend

- STRAWN
- CADDO
- TANNEHILL
- BASE DOTHAN
- BURSON SAND
- CANYON
- CONGLOMERATE
- TANNEHILL-C
- BURSEN
- OTHER

Swenson Minerals Group

PRODUCTION by lease DETAIL AREA:
CUMULATIVE OIL to MAY 2021

Conglomerate (Bend) 40 MBO

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OIL Legend

Layer Symbology

Production

☒ Auto Apply☒ Auto Apply

COLORS & SIZING ANNOTATIONS

100% 

0 

Cum Oil

HIDE ADVANCED

Size Bin Legend

- 0 - 70,000

☐ 70,000 - 140,000

☐ 140,000 - 175,000

175,000 - 210,000

175,000 - 210,000

210,000 - 245,000

015.000 000.000

245,000 - 280,000

245,000 - 280,000

 > 280,000

Color By: Reservoir

HIDE ADVANCED

Colors: (Default) Discrete Set 1

☐ Custom Values

Rank By: Total Cum Oil

1000

Color Bin Legend

STRAWN

 STRAWN

 CADD

 CADDO

 TANNEHILL

TANNEHILL

BASE DOTHAN

- BASE DOTHAN
- BLURSON SAND

 BURSON SAND

 CANYON

 CANYON

 CONGLOMERATE

CONGLOMERATE

TANNEHILL -C-

TANNEHILL -C-

BURSEN

BURSEN

OTHER

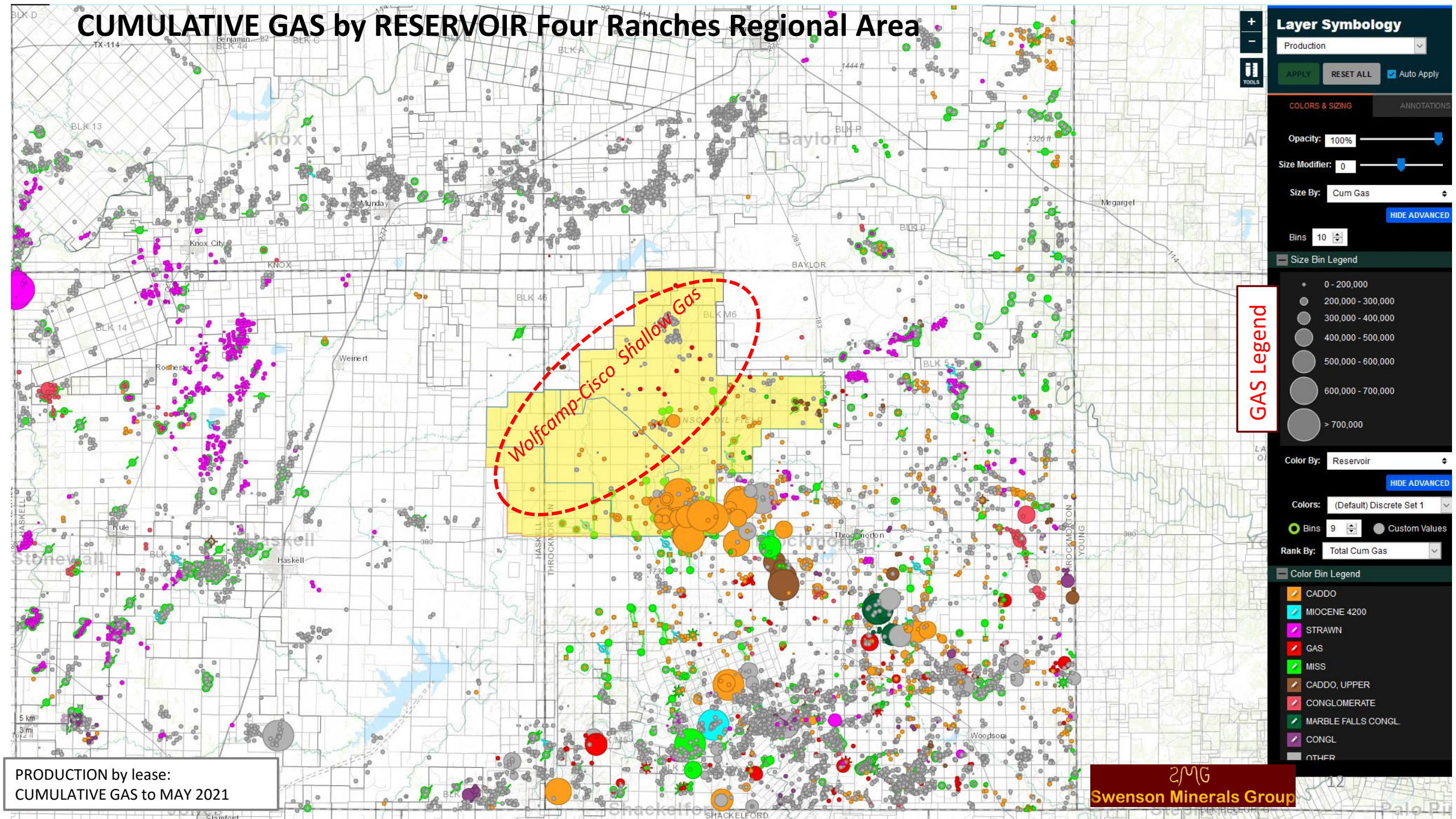
■ OTHER

OTHER

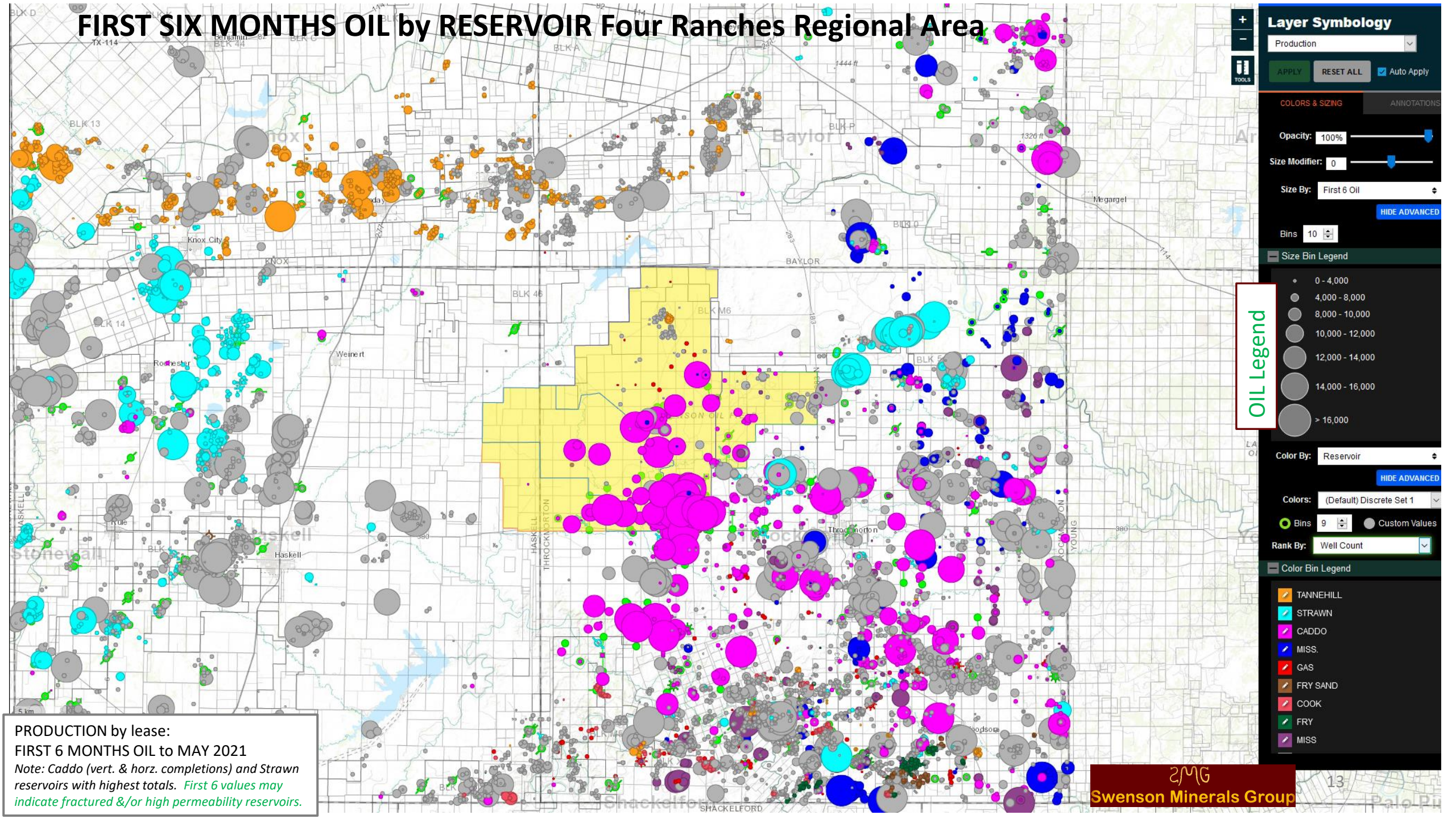
11

oup

CUMULATIVE GAS by RESERVOIR Four Ranches Regional Area



FIRST SIX MONTHS OIL by RESERVOIR Four Ranches Regional Area



+

-

TOOLS

Layer Symbology

Production

APPLY RESET ALL Auto Apply

COLORS & SIZING

ANNOTATIONS

Opacity: 100%

Size Modifier: 0

Size By: First 6 Oil

HIDE ADVANCED

Bins 10

Size Bin Legend

0 - 4,000

4,000 - 8,000

8,000 - 10,000

10,000 - 12,000

12,000 - 14,000

14,000 - 16,000

> 16,000

Color By: Reservoir

HIDE ADVANCED

Colors: (Default) Discrete Set 1

Bins 9 Custom Values

Rank By: Well Count

Color Bin Legend

TANNEHILL

STRAWN

CADDO

MISS.

GAS

FRY SAND

COOK

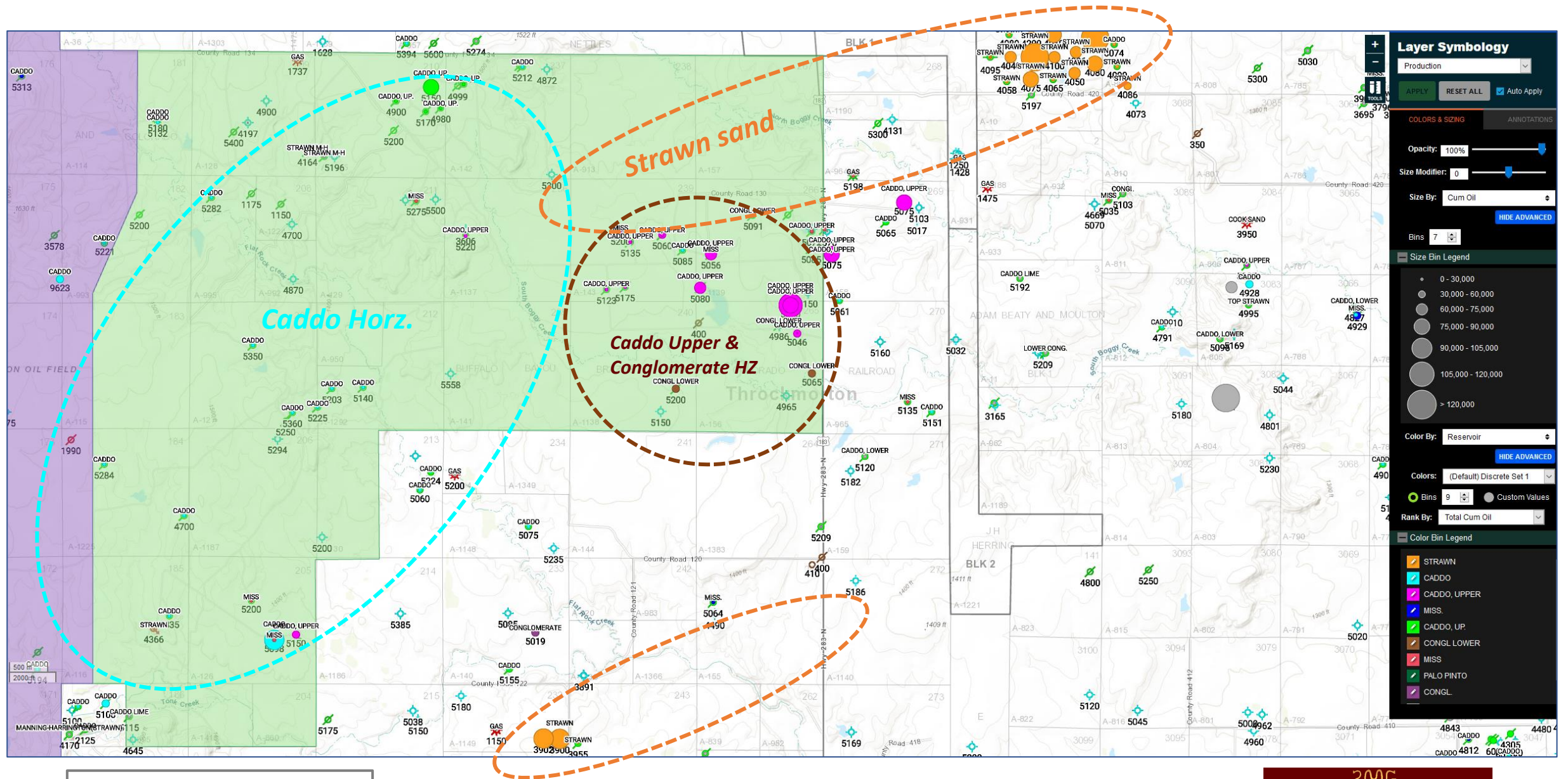
FRY

MISS

OIL Legend

PRODUCTION by lease:
FIRST 6 MONTHS OIL to MAY 2021
Note: Caddo (vert. & horz. completions) and Strawn
reservoirs with highest totals. First 6 values may
indicate fractured &/or high permeability reservoirs.

SLCC RANCH DETAIL NEW LEAD AREA Polygons by Reservoir



WELL TOTAL DEPTH & PRODUCING
RESERVOIR FORMATION NAME

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NEW LEAD AREA

Polygons by Reservoir

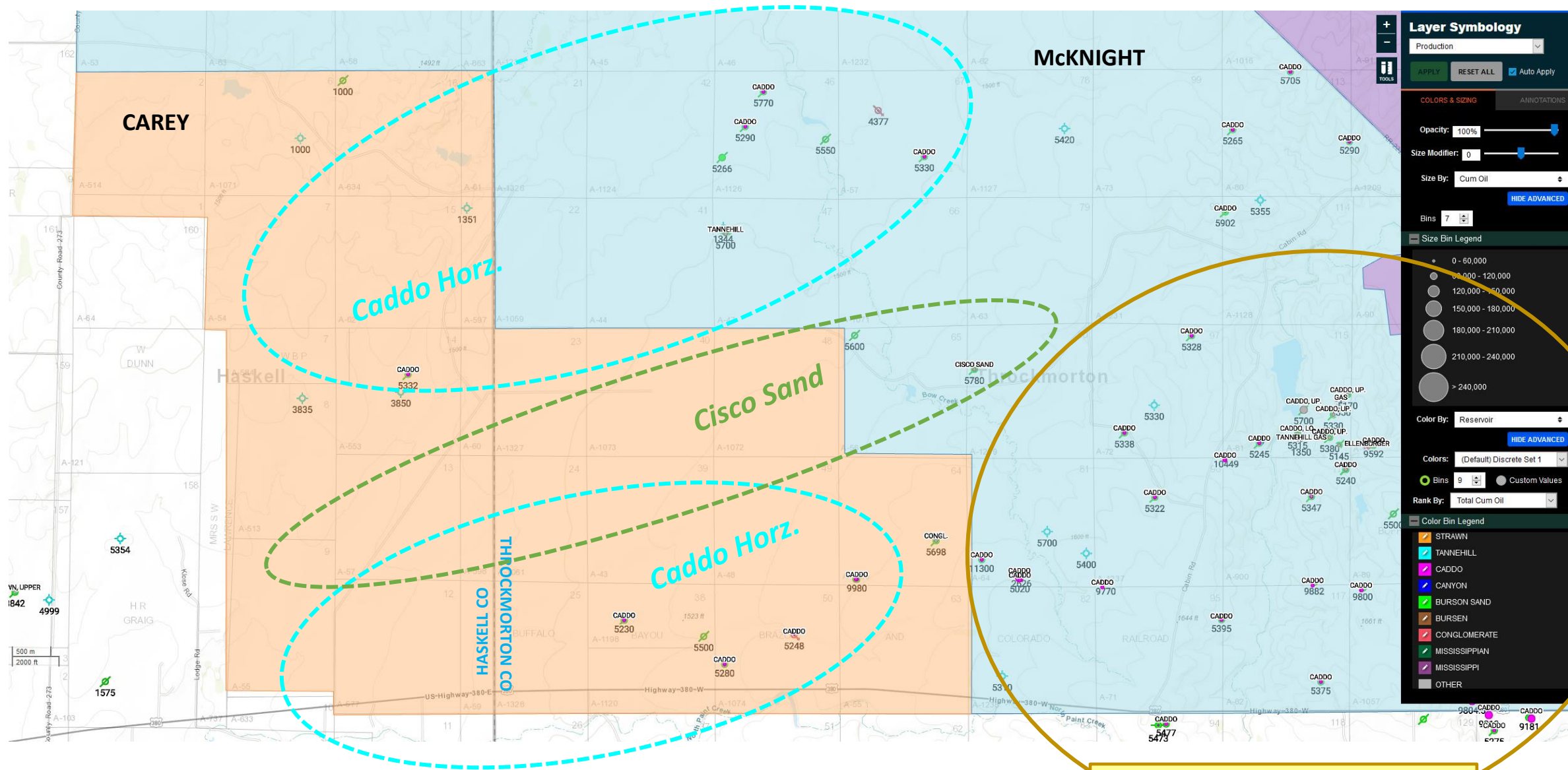


NEW LEAD AREA

Polygons by Reservoir



CAREY & McKNIGHT (sw) RANCH DETAIL NEW LEAD AREA Polygons by Reservoir



+

-

TOOLS

Production

APPLY

RESET ALL

☒ Auto Apply

COLORS & SIZING

ANNOTATIONS

Opacity: 100%

Size Modifier: 0

Size By: Cum Oil

HIDE ADVANCED

Bins 7

Size Bin Legend

0 - 60,000

60,000 - 120,000

120,000 - 180,000

180,000 - 210,000

210,000 - 240,000

> 240,000

Color By: Reservoir

HIDE ADVANCED

Colors: (Default) Discrete Set 1

☒ Bins

☐ Custom Values

Rank By: Total Cum Oil

Color Bin Legend

STRAWN

TANNEHILL

CADDO

CANYON

BURSON SAND

BURSEN

CONGLOMERATE

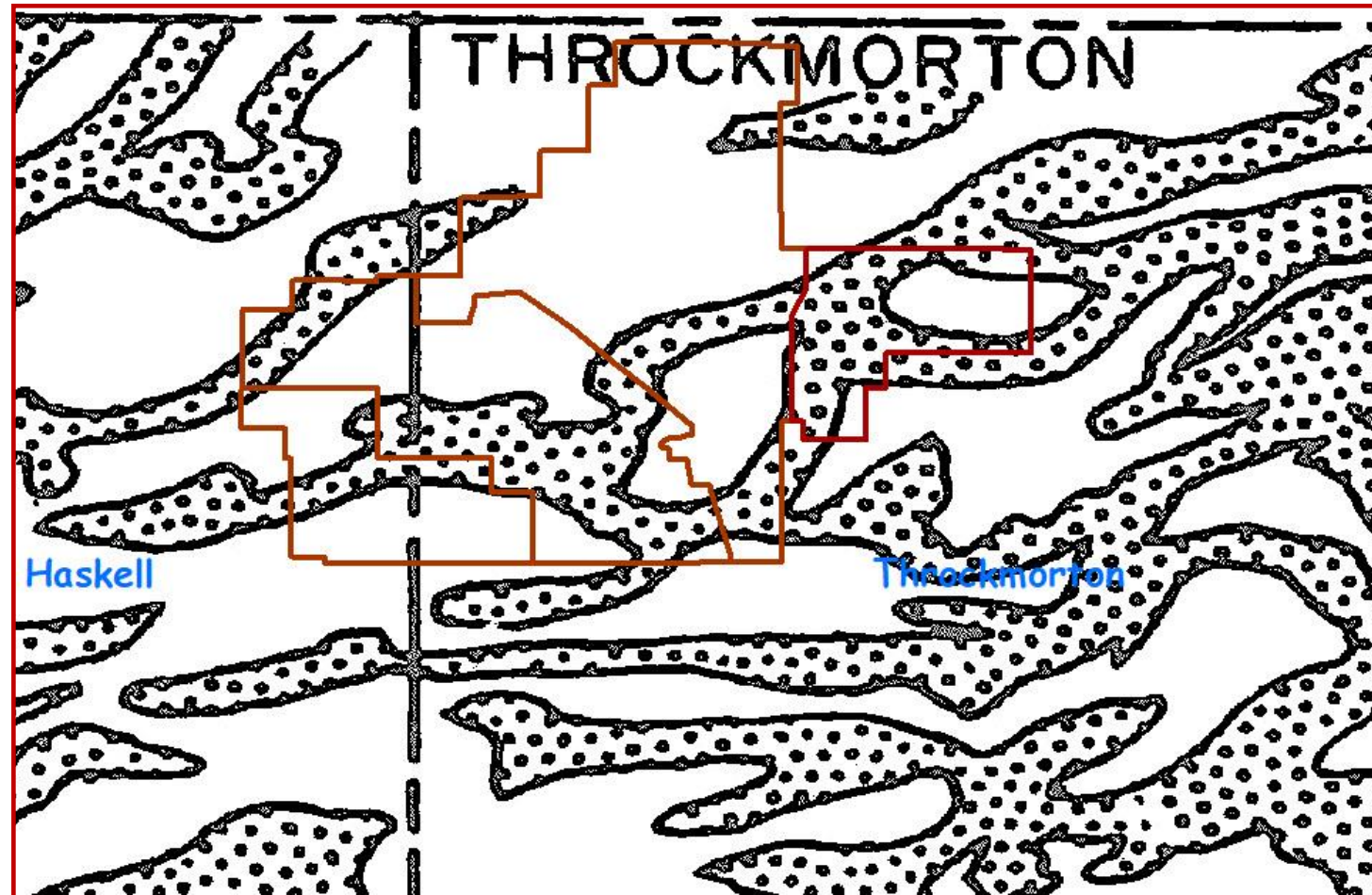
MISSISSIPPIAN

MISSISSIPPI

OTHER

Existing Caddo Horizontal producing play
operated by Brazos River Exploration

Additional Play Maps



Cisco Fluvial System Play - defined by permeable channel reservoirs overlain on SMG Four Ranches Mineral Area. Map from Texas Bureau of Economic Geology; Pennsylvanian Depositional Systems in North-Central Texas, 1973)

SMG

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